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09/744,768	01/30/2001	Naoki Kuwata	Q62125	4964

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EXAMINER

SELBY, GEVELL V

ART UNIT

PAPER NUMBER

2615

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/744,768

Applicant(s)

KUWATA ET AL.

Examiner

Gevell Selby

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments filed 3/22/04 have been fully considered but they are not persuasive.
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In view of the applicant's amendments to the abstract and claim 6, the objections are hereby withdrawn.

**Examiner's Response:**

The applicant's contends the Shalit reference does not disclose handling picture data comprised of a plurality of element colors, and adjusts the proportion of the values of each of the element colors as claimed in claims 1, 6, and 11 as "relative proportions among element colors be adjusted to prescribed values correspondingly to luminance values after luminance conversion". The examiner respectfully disagrees.

The Shalit reference does disclose handling picture data comprised of a plurality of elements colors of the original image as claimed. The original image captured by the apparatus is of a gray scale CRT screen composed of a plurality of colors including black, white, and several shades of gray (see column 4, lines 18-20). The claims do not specify what colors the image capture device receives, just that it captures the colors of the original image as the Shalit reference does. The Shalit reference further discloses adjusting or compensating the luminance value of every pixel to produce the tonal reproduction accurately (see column 5, lines 14-18). The pixels are adjusted by values using a lookup table stored in memory (see column 5, lines 1-3).

In regard to claim 8, in view of the applicant's amendment to claims 8, claim 8, is now examined as depending alternatively on claims 6 and 7.

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***Claim Objections***

2. Claim 2 is objected to because of the following informalities:

Claim 2 depends on itself.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1 - 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Shalit, US 4,939,581.**

In regard to claim 1, Shalit, US 4,939,581, discloses a monotone conversion apparatus (see figure 3) characterized in that "it is provided with a picture acquisition unit (see figure 3, element 24) for expressing a picture in picture elements in a dot matrix form and acquiring picture data representing each picture element in gradation of prescribed element colors into which an original color is separated (see column 4, lines 10-18);

a luminance distribution totaling unit (see figure 3, element 38) for totaling the luminance equivalent of each picture element on the basis of these picture data (see column 7, line 45+);

a luminance correspondence setting unit (see figure 3, element 30) for setting a correspondence relationship for collective accomplishment of a conversion so that, while converting the pertinent luminance distribution on the basis of the totaled luminance distribution, relative proportions among element colors be adjusted to prescribed values correspondingly to luminance values after luminance conversion (see column 5, lines 6-19); and

a picture data conversion unit (see figure 3, element 30) for generating monotone picture data in which the luminance of each picture element in said picture data is converted on the basis of this set correspondence relationship (see column 5, lines 13-17).”

In regard to claim 2, Shalit, US 4,939,581, discloses a monotone conversion apparatus, asset forth in claim 1, characterized in that “said luminance correspondence setting unit, in adjusting relative proportions among element colors to prescribed values (see column 5, lines 6-17), achieves smooth variation over the whole range of tone levels while realizing certain relative proportions in luminance equivalent terms by utilizing a tone curve.”

The description is inherent to the luminance correspondence setting unit because it describes a characteristic of an adjusted unit.

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In regard to claim 3, Shalit, US 4,939,581, discloses a monotone conversion apparatus, as set forth in claim 1 or 2, characterized in that "said luminance correspondence setting unit generates a plurality of conversion tables (see figure 3, elements 31 and 32) matching individual ones of said correspondence relationships, and generates an integrated conversion table to integrate these conversion tables (see column 7, line 55 to column 8, line 2)."

In regard to claim 4, Shalit, US 4,939,581, discloses a monotone conversion apparatus, as set forth in claim 3, characterized in that "said luminance correspondence setting unit causes conversion tables matching said individual correspondence relationships to have tone ranges more ~~detailed~~ (accurate) than the tone range of said integrated conversion table (see columns 8-9, table)."

Instead of using the complete LUT 32, a smaller table of 11 values are used where gives an approximate relationship as compared to using all the values in the LUT 32 to make a more accurate range.

In regard to claim 5, Shalit, US 4,939,581, discloses a monotone conversion apparatus, as set forth in claim 1 or 2, characterized in that "said luminance correspondence setting unit said correspondence relationships on the basis of the result of successive execution of computations representing the individual correspondence relationships (see column 9, lines 25-47)."

The luminance correspondence setting unit uses a series a computations to compute the ideal density and ideal pixel values used in the table for comparisons.

In regard to claim 6, Shalit, US 4,939,581, discloses a monotone conversion method ~~picture~~ characterized in that "it is provided with a picture acquisition step to express a picture in picture elements in a dot matrix form and acquire picture data representing each picture element in gradation of prescribed element colors into which an original color is separated (see column 4, lines 52-59);

a luminance distribution totaling step to total the luminance equivalent of each picture element on the basis of these picture data (see column 7, line 45+);

a correspondence setting step to set a correspondence relationship for collective accomplishment of conversion so that, while converting the pertinent luminance distribution on the basis of the totaled luminance distribution, relative proportions among element colors be adjusted to prescribed values correspondingly to luminance values after luminance conversion (see column 5, lines 6-19); and

a picture data conversion step to generate monotone picture data in which the luminance of each picture element in said picture data is converted on the basis of this set correspondence relationship (see column 5, lines 13-17)."

In regard to claim 7, Shalit, US 4,939,581, discloses a monotone conversion apparatus (method), asset forth in claim 6, characterized in that "said luminance correspondence setting ~~unit~~-(step), in adjusting relative proportions among element colors to prescribed values (see column 5, lines 6-17), achieves smooth variation over the whole range of tone levels while realizing certain relative proportions in luminance equivalent terms by utilizing a tone curve."

The description is inherent to the luminance correspondence setting unit because it describes a characteristic of an adjusted unit.

In regard to claim 8, Shalit, US 4,939,581, discloses a monotone conversion method, as set forth in claims 6 or 7, characterized in that "said luminance correspondence setting unit (step) generates a plurality of conversion tables (see figure 3, elements 31 and 32) matching individual ones of said correspondence relationships, and generates an integrated conversion table to integrate these conversion tables (see column 7, line 55 to column 8, line 2 also see column 8-9, Table)."

In regard to claim 9, Shalit, US 4,939,581, discloses a monotone conversion method (apparatus), as set forth in claim 8, characterized in that "at said correspondence setting step conversion tables matching said individual correspondence relationships have tone ranges more detailed (accurate) than the tone range of said integrated conversion table (see column 8-9, Table)."

Instead of using the complete LUT 32, a smaller table of 11 values are used where gives an approximate relationship as compared to using all the values in the LUT 32 to make a more accurate range.

In regard to claim 10, Shalit, US 4,939,581, discloses a monotone conversion method, as set forth in claim 6 or 7, characterized in that "at said correspondence setting step said correspondence relationships are set on the basis of the result of successive execution of computations representing the individual correspondence relationships (see column 9, lines 24-47)."



The luminance correspondence setting unit uses a series of computations to compute the ideal density and ideal pixel values used in the table for comparisons.

In regard to claim 11, Shalit, US 4,939,581, discloses a medium recording (see figure 3, element 39) "thereon a monotone conversion program for causing a computer to express a picture in picture elements in a dot matrix form, acquire picture data representing each picture element in gradation of prescribed element colors into which an original color is separated, and thereby generate monotone picture data, said monotone conversion program being characterized in that it is provided with (see column 4, 55-59):

- a luminance distribution totaling step to total the luminance equivalent of each picture element on the basis of these picture data (see column 7, line 56 to column 8, lines 2);

- a luminance correspondence setting step to set a correspondence relationship for collective accomplishment of conversion so that, while converting the pertinent luminance distribution on the basis of the totaled luminance distribution, relative proportions among element colors be adjusted to prescribed values correspondingly to luminance values after luminance conversion (see column 5, lines 6-19); and

- a picture data conversion step to generate monotone picture data in which the luminance of each picture element in said picture data is converted on the basis of this set correspondence relationship (see column 5, lines 13-17)."

In regard to claim 12, Shalit, US 4,939,581, discloses a medium recording thereon monotone conversion program, as set forth in claim 11, "said monotone conversion program being characterized in that at said luminance correspondence setting step, in

adjusting relative proportions among element colors to prescribed values (see column 5, lines 6-17), achieves smooth variation over the whole range of tone levels while realizing certain relative proportions in luminance equivalent terms by utilizing a tone curve.”

The description is inherent to the luminance correspondence setting unit because  
it describes a characteristic of an adjusted unit.

In regard to claim 13, Shalit, US 4,939,581, discloses a medium recording thereon monotone conversion program, as set forth in Claim 11 or 12, “said monotone conversion program being characterized in that at said luminance correspondence setting step a plurality of conversion tables (see figure 3, element 31 and 32) matching individual ones of said correspondence relationships are generated, and an integrated conversion table to integrate these conversion tables is generated see column 7, line 55 to column 8, line 2).”

In regard to claim 14, Shalit, US 4,939,581, discloses a medium recording thereon monotone conversion program, as set forth in Claim 13, “said monotone conversion program being characterized in that at said luminance correspondence setting step conversion tables matching said individual correspondence relationships have tone ranges more ~~detailed~~ (accurate) than the tone range of said integrated conversion table (see column 8-9, Table).”

Instead of using the complete LUT 32, a smaller table of 11 values are used where gives an approximate relationship as compared to using all the values in the LUT 32 to make a more accurate range.

In regard to claim 15, Shalit, US 4,939,581, discloses a medium recording thereon monotone conversion program, as set forth in Claim 11 or 12, said monotone conversion

program being characterized in that at said luminance correspondence setting step said correspondence relationships are set on the basis of the result of successive execution of computations representing the individual correspondence relationships (see column 9, lines 24-47).

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### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Ngoc-Yen Vu can be reached on 703-305-4946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs



NGOC-YEN VU  
PRIMARY EXAMINER